

WHAT IS CLAIMED IS:

- 1 1. An edible ink with a viscosity of about 2000 to about 16000 cp at 25 °C.
- 1 2. The edible ink of claim 1, further comprising at least one soluble or insoluble
2 pigment, wherein the ink has a pigment density of about 0.1 g/l to about 0.25 g/l and an ink
3 density of about 1.1 g/l to about 2.0 g/l.
- 1 3. An edible ink comprising about 10% to about 20% by weight water, about
2 70% to about 80% by weight of at least one sweetener, about 5% to about 10% by weight of
3 at least one emulsifier, about 1% to about 5% of a humectant, wherein the ink has a viscosity
4 of about 2000 to about 3100 cp at 25 °C.
- 1 4. The edible ink of claim 3, further comprising at least one soluble or insoluble
2 pigment, wherein the ink has a pigment density of about 0.1 g/l to about 0.25 g/l and an ink
3 density of about 1.1 g/l to about 2.0 g/l.
- 1 5. The edible ink of claim 3, wherein the sweetener is selected from the group
2 consisting of glucose, sorbitol, sucrose, and dextrose.
- 1 6. The edible ink of claim 3, wherein the sweetener comprises about 18% to
2 about 28% by weight glucose, about 18% to about 28% by weight sorbitol, about 18% to
3 about 36% sucrose, and about 2% to about 6% by weight dextrose.
- 1 7. The edible ink of claim 3, wherein the sweetener comprises about 23% by
2 weight glucose, about 23% by weight sorbitol, about 27% by weight sucrose, and about 4%
3 by weight dextrose.
- 1 8. The edible ink of claim 3, wherein the emulsifier is selected from the group
2 consisting of lecithin and polyoxyethylene sorbitan monostearate.
- 1 9. The edible ink of claim 3, wherein the emulsifier comprises about 3% by
2 weight of polyoxyethylene sorbitan monostearate and about 3% by weight of lecithin.
- 1 10. The edible ink of claim 3, wherein the ink comprises about 2% by weight of
2 the humectant.

- 1 11. The edible ink of claim 10, wherein the humectant is glycerine.
- 1 12. A printing process comprising applying the ink of claim 3 to a substrate.
- 1 13. An edible ink comprising about 70% to about 80% by weight of a barrier
2 forming compound, about 1% to about 10% by weight of a drying agent, about 10% to about
3 20% by weight of a film former, about 1% to about 3% by weight of an emulsifier, about 1%
4 to about 5% by weight water, about 1% by weight of a water repellant, wherein the ink has a
5 viscosity of about 2000 to about 3100 cp at 25 °C.
- 1 14. The edible ink of claim 13, further comprising at least one soluble or insoluble
2 pigment, wherein the ink has a pigment density of about 0.1 g/l to about 0.25 g/l and an ink
3 density of about 1.1 g/l to about 2.0 g/l.
- 1 15. The edible ink of claim 13, wherein the barrier forming compound comprises
2 a shellac/glaze solution.
- 1 16. The edible ink of claim 13, wherein the ink comprises about 75% by weight of
2 the barrier forming compound.
- 1 17. The edible ink of claim 13, wherein the drying agent comprises an alcohol
2 selected from the group consisting of methyl alcohol, ethyl alcohol, isopropyl alcohol and
3 butyl alcohol, and mixtures thereof.
- 1 18. The edible ink of claim 13, wherein the drying agent comprises about 1.5% by
2 weight of each of isopropyl, ethyl and butyl alcohols.
- 1 19. The edible ink of claim 13, wherein the ink comprises about 15% by weight of
2 the film former.
- 1 20. The edible ink of claim 13, wherein the film former comprises about 5% by
2 weight polyvinylpyrrolidone and about 10% by weight hydroxypropylmethylcellulose.
- 1 21. The edible ink of claim 13, wherein the ink comprises about 1% to about 3%
2 by weight of an emulsifier and/or hydrocolloid stabilizer.

- 1 22. The edible ink of claim 13, wherein the emulsifier is lecithin.
- 1 23. The edible ink of claim 21, wherein the hydrocolloid stabilizer is sodium
2 alginate.
- 1 24. The edible ink of claim 13, wherein the ink comprises about 1% by weight of
2 the water repellant.
- 1 25. The edible ink of claim 13, wherein the water repellant is
2 dimethylpolysiloxane.
- 1 26. A printing process comprising applying the ink of claim 13 to a substrate.
- 1 27. A lithographic printing process for forming an image layer on a surface of an
2 edible article, comprising:
3 (a) providing a master with an ink receptive layer thereon;
4 (b) contacting the ink receptive layer with an edible ink to form an ink layer
5 thereon, wherein the edible ink has a viscosity of about 2000 to about 3100 cp at 25 °C;
6 (c) transferring the ink layer to a substrate to form an image layer thereon.
- 1 28. The process of claim 27, wherein the edible ink comprises about 10% to about
2 20% by weight water, about 70% to about 80% by weight of at least one sweetener, about
3 5% to about 10% by weight of at least one emulsifier, and about 1% to about 5% of a
4 humectant.
- 1 29. The process of claim 27, wherein the edible ink further comprises at least one
2 soluble or insoluble pigment, and wherein the ink has a pigment density of about 0.1 g/l to
3 about 0.25 g/l and an ink density of about 1.1 g/l to about 2.0 g/l.
- 1 30. The process of claim 27, wherein the edible ink comprises about 70% to about
2 80% by weight of a barrier forming compound, about 1% to about 10% by weight of a drying
3 agent, about 10% to about 20% by weight of a film former, about 1% to about 3% by weight
4 of an emulsifier, about 1% to about 5% by weight water, and about 1% by weight of a water
5 repellant.

1 31. The process of claim 30, wherein the edible ink further comprises at least one
2 soluble or insoluble pigment, and wherein the ink has a pigment density of about 0.1 g/l to
3 about 0.25 g/l and an ink density of about 1.1 g/l to about 2.0 g/l.

1 32. The process of claim 27, wherein the substrate is selected from the group
2 consisting of wax coated paper, plastic coated paper and acetate paper.

1 33. The process of claim 32, wherein the plastic coated paper is a polypropylene
2 coated paper.

1 34. The process of claim 27, wherein the substrate is selected from the group
2 consisting of sugar fondant, wafer, rice paper, starch sheets, sugar sheets and icings.

1 35. The process of claim 27, wherein step (c) comprises transferring the ink layer
2 to a surface of a blanket cylinder, and transferring the ink layer from the blanket cylinder to
3 the substrate to form an image layer thereon.

1 36. The process of claim 35, wherein the blanket cylinder is a rubber roller.

1 37. A decorating kit comprising a substrate having printed thereon a substantially
2 non-tacky layer of an edible ink, wherein the edible ink is applied to the substrate using a
3 lithographic printing process.

1 38. A lithographic printer comprising a master having an edible ink thereon,
2 wherein the edible ink has a viscosity of about 2000 to about 3100 cp at 25 °C and a pigment
3 density of about 0.1 g/l to about 0.25 g/l and an ink density of about 1.1 g/l to about 2.0 g/l.